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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,257	09/11/2003	Takaaki Abe	50195-384	3549

7590

10/12/2006

McDERMOTT, WILL & EMERY
600 13th Street, N.W.
Washington, DC 20005-3096

EXAMINER

ONEILL, KARIE AMBER

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 10/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/659,257	ABE ET AL.	
	Examiner	Art Unit	
	Karie O'Neill	1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 1 and 2 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The Applicant's amendment filed on September 11, 2006, was received. Claims 1-14 are pending in this office action. Claims 3, 5 and 14 were amended. Claims 1-2 have been withdrawn from consideration.

Claim Rejections - 35 USC § 102

2. Applicant's arguments, see pages 6-11, filed August 9, 2006, with respect to the rejection(s) of claim(s) 3-11 and 13-14 under U.S.C. §102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of new prior art, Takahashi et al. (US 2001/0038938 A1) in view of Yamazaki et al. (US 6,632,538 B1).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3-11 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al. (US 2001/0038938 A1) in view of Yamazaki et al. (US 6,632,538 B1).

With regard to Claims 3, 5, 6, 9 and 14, Takahashi et al. disclose an electrochemical element internally sealed in a laminate sheet provided with a thermally welded resin layer (paragraph 0020-0021) and a metallic layer laminated thereon

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(paragraph 007), comprising: an electric power generating element (10) being sealed in an envelope (30) while terminals or tabs (13, 14) extend out of the envelope, and wherein the resin layer is laminated on to the metallic layer and is in contact with the electrochemical element (paragraph 0077), and wherein the tab and thermally welded resin layer are welded by permitting a thermally welded area, which is formed by at least one of the thermally welded resin layer and the tab, or the thermally welded resin layer and the tab integrally welded to one another (paragraph 0078, Figures 8 and 9) and wherein the thermally welded area is composed of thermally welded resin and the tab being thermally welded to a partial portion of the thermally welded resin layer. For examining purposes, examiner is interpreting the term "thermal welded area" as being the portion consisting of the thermally welded resin layer plus the tab. Takahashi et al. does not disclose wherein the thermally welding resin layer of a laminate sheet is connected to the electric power generating element with an amount of resin allowing an amount of resin to be pushed outside the tab, to be compensated.

Yamazaki et al. disclose in Figures 55 (a-c), each of the tabs (59, 60) being coated with an insulating film layer (92) formed of hot melt resins and extending on the outer and inner side of the end edge of the case (51) from which the tabs project outside. The insulating film is formed so as to cover both the surfaces of the tabs as well as the side surfaces of the tabs (see Thirteenth Embodiment). Therefore, at the time of the invention it would have been obvious to one of ordinary skill in the art to use an insulating film or amount of resin pushed outside the tab in the battery assembly of Takahashi et al., because Yamazaki et al. teaches that using an insulating film is necessary because it is possible for tabs to come into contact with an exposed conductive layer of the laminating

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sheet and when this happens the battery packet does not function normally and the battery is exhausted and unable to function.

With respect to Claims 4, 7, 8, 10 and 11, the battery element according to claims 3 and 5, have a resin layer with a thickness of 30 to 130 microns, a metal layer with a thickness of 15 to 150 microns, tabs with a thickness of 50 to 100 microns and the laminate film having an overall thickness of 50 to 200 microns, as well as the thermally welded area having an overall thickness of 80 to 230 microns being composed of the thermally welded resin plus the tab. In Claim 4, Takahashi et al. discloses a thickness of the resin layer (30 to 130 microns) having a value equal to or greater than one half the thickness of the tab, which would be 25 to 50 microns. In Claim 7, Takahashi et al. discloses the thermally welded area of the thermally welded resin layer is larger than a thickness of a remaining area of the portion thermally welded (80 to 230 microns minus 30 to 130 microns equals 50 to 100 microns) by a value equal to or greater than one half the thickness of the tab, which is 25 to 50 microns. In Claim 8, Takahashi et al. discloses, a thickness of the thermally welded resin area of the thermally welded resin layer is determined to be larger than the thickness of the remaining area portion to be thermally welded (80 to 230 microns minus 30 to 130 microns equals 50 to 100 microns) within a range equal to or less than the thickness of the tab, which is 50 to 100 microns. In Claim 10, Takahashi et al. discloses, a thickness of the thermally welded area (80 to 230 microns) to be equal to or larger than one half the thickness of the tab (25 to 50 microns). In Claim 11, Takahashi et al. discloses the thickness of the thermally welded area (80 to 230 microns) to be equal to or less than the thickness of the tab (50 to 100 microns).

With respect to Claim 13, Takahashi et al. discloses in paragraph 0002, various forms of batteries have been used in a wide variety of applications, mainly automotive.

5. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al. (US 2001/0038938 A1) and Yamazaki et al. (US 6,632,538 B1), as applied to Claims 1-11 and 13-14 above, and in further view of Watanabe et al (US 6,692,866 B2).

Takahashi et al. and Yamazaki et al. disclose the laminate battery according to Claim 5 in paragraph 3 above, including the tab including a negative electrode tab composed of nickel and a positive electrode tab composed of aluminum (paragraph 0085), but do not disclose wherein the cross-sectional area of the negative electrode tab (x) and the positive electrode tab (y) satisfying the following formula: $1 < x/y \leq 2.6$.

Watanabe et al. discloses the laminate battery having positive and negative tabs of different sizes. The negative tab is larger than the positive tab (column 6 lines 3-4), which would allow for the cross-sectional area of the negative tab (x) to be larger than the cross-sectional area of the positive tab (y) if both are made of equal thickness. When fit into the equation x/y , the end result would be $1 < x/y \leq 2.6$, when the surface area of the tabs are close to one another. Therefore, at the time of the invention, it would have been obvious to a person of ordinary skill in the art to use tabs with a cross-sectional area different than one another in conjunction with the Takahashi et al. and Yamazaki et al. references, because Watanabe et al. teaches diminishing the possibility of short-circuiting the battery and provides a battery with high reliability.

Response to Arguments

6. Applicant's arguments, see pages 6-12, filed August 9, 2006, with respect to the rejection(s) of claim(s) 3, 5 and 14 under 35 U.S.C. §102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Takahashi et al. (US 2001/0038938 A1) in view of Yamazaki et al. (US 6,632,538 B1).

7. *Applicant's principal arguments are:*

(a) Groups I and II are clearly not related as intermediate-final product

(b) Takahashi et al. do not disclose an amount of resin allowing an amount of resin to be pushed outside the tab to be compensated

In response to Applicant's arguments, please consider the following comments:

(a) Examiner stands by original characterization of Groups I and II being intermediate-final product because the intermediate product is deemed to be useful as a packaging laminate sheet for holding a variety of items other than just a battery element and the inventions are deemed patentably distinct because there is nothing on this record to show them to be obvious variants.

(b) This limitation was not present in the rejection of the original claims and while the claims are interpreted in light of the specification this limitation was not present in the independent claims at the time.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karie O'Neill whose telephone number is (571) 272-8614. The examiner can normally be reached on Monday through Friday from 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KAO


DAI-WEIYUAN
PRIMARY EXAMINER

Karie O'Neill
Examiner
Art Unit 1745